DECLARATION

SELECTED REMEDIAL ALTERNATIVE FOR THE 12th STREET LANDFILL-OPERABLE UNIT 4 OF THE ALLIED PAPER, INC./PORTAGE CREEK/KALAMAZOO RIVER SUPERFUND SITE CITY OF PLAINWELL, MICHIGAN

Statement of Basis and Purpose

This decision document presents the selected remedial action (RA) for the 12th Street Landfill-Operable Unit 4 (12th St.-OU4) of the Allied Paper, Inc./Portage Creek/ Kalamazoo River Superfund site (Site). The 12th St.-OU4 is one of several polychlorinated biphenyl (PCB) source areas attributed to the potentially responsible parties (PRPs) at the Site. The remedy was chosen in a manner that is consistent with the Comprehensive Environmental Response, Compensation, and Liability Act, 1980 PL 96-510 (42 U.S.C. § 9601 et. Seq.), as amended by the Superfund Amendments and Reauthorization Act of 1986, as well as the Superfund implementing regulations of the National Oil and Hazardous Substances Pollution Contingency Plan (40 Code of Federal Regulations (CFR) Part 300). This Record of Decision (ROD) is applicable only to the 12th St.-OU4, which comprises the 12th Street Landfill (landfill) and four areas outside the landfill where PCB-contaminated residual material has eroded.

The 12th St.-OU4 is located near the city of Plainwell, Allegan County, Michigan (Figure 1). PCBs are present in the paper residuals (residuals) disposed of at the landfill by the owners and operators of the Plainwell Paper Mill. Due to erosion, the PCB-contaminated residual material has migrated from the landfill to the adjacent areas. Listed below are the PCB-contaminated areas that comprise this operable unit (Figure 2).

1. The landfill from which the PCB contamination in surrounding areas migrated, including any groundwater contamination and landfill leachate, if any.
2. The woodland area (woodland) in the southeast corner of the 12th St.-OU4.
3. Wetlands, as identified by National Wetland Inventory maps, adjacent to the landfill to the north and northwest (wetlands).
4. A portion of the adjacent gravel operation property (adjacent property), that borders the landfill to the west.
5. The portion of the former powerhouse discharge channel of the Plainwell Dam (former powerhouse discharge channel) on the Kalamazoo River that contains residuals that are contiguous with the east side of the landfill.

Assessment of the Site

The actual or threatened releases of hazardous substances from the 12th St.-OU4, if not addressed by implementing the RA in this ROD, present an imminent and substantial endangerment to public health, welfare, or the environment.

Description of the Selected Remedy

The purpose of this remedy is to eliminate the continued migration of PCBs from the 12th St.-OU4 to the Kalamazoo River, as well as from the landfill to the woodland, wetlands, adjacent property, and the former powerhouse discharge channel. This remedy will reduce, and possibly eliminate the unacceptable risk associated with the landfill from exposure to PCBs. This RA includes excavating the eastern portion of the landfill adjacent to the former powerhouse discharge channel and the Kalamazoo River; excavation of residual material that has eroded into the areas outside the landfill; relocation of the excavated material back into the landfill; and, construction of an on-site containment system.

This ROD covers the landfill and the residual material that is present in the adjacent areas that are listed above. The remaining portion of the former powerhouse discharge channel and those locations within the adjacent areas where there is no visual evidence of residual material are not addressed in this RA. Visual criteria will be the primary method by which PCB-contaminated materials will be identified, although this ROD does provide that the agency implementing this remedy can require additional sampling and analysis at those locations where it determines that visual criteria alone are inadequate to determine the extent of eroded, PCB-contaminated materials. The selected remedy further provides for post-excavation sampling in order to determine whether, upon completion of the remedy selected in this ROD, additional remedial work is necessary to reduce the risk to human health or the environment to levels acceptable under applicable or relevant and appropriate requirements. If such post-excavation sampling determines that unacceptable risks remain, additional remedial work will be required in future RODs for the site.

The major components of the selected remedy include:

1. Excavation and relocation into the landfill of contaminated residuals currently in the woodland, wetlands, and adjacent property, and the residuals in the former powerhouse discharge channel that are contiguous with the eastern side of the landfill. Following relocation into the landfill of the residual material, a containment system shall be constructed that complies with the requirements of Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).

2. Excavation and relocation into the landfill of the east side of the landfill along the former powerhouse discharge channel. The excavation shall be extensive enough to create a buffer zone sufficient to insure that, for the lifetime of the remedy, no hydraulic connection exists between the PCB-contaminated wastes within the newly constructed landfill containment system and the Kalamazoo River or the former powerhouse discharge channel.

3. Restoration of areas that are excavated, cleared and grubbed, or otherwise affected by the RA.

4. Construction of a side wall containment system (SWCS) shall be constructed around the outside of the landfill. The existing sides of the landfill are constructed of sand, fly ash, and PCB-contaminated residuals and were not designed to provide side slope stability, flood protection, and erosion control, or to prevent releases of leachate. The existing sides shall be completely covered by a new SWCS that is designed to prevent the release of PCBs and which provides the necessary side slope stability, flood protection, and erosion control. The containment system shall be designed to meet the relevant portions of the Michigan Solid Waste Landfill closure regulations pursuant to Part 115, Solid Waste Management, of the NREPA. Disposal of the residuals with PCB contamination at or above 50 parts per million, which are PCB remediation wastes under the Toxic Substance Control Act (TSCA), will take place pursuant to the risk-based disposal method set forth in 40 CFR Section 761.61(c). The erosion protection provided shall be sufficient to protect the containment system from a 500-year flood event. The erosion protection shall extend to a minimum elevation of 707.0 feet above mean sea level, which is two feet above the 100-year flood elevation.

5. A cover (cap) will be constructed over the landfill as part of the containment system to minimize infiltration of precipitation through the landfill, prevent migration of residuals or leachate from the landfill into the adjacent areas, and eliminate direct contact hazards. The cap shall be designed to meet relevant portions of the closure regulations pursuant to Part 115, Solid Waste Management, of the NREPA. The cap consists of the following components from bottom to top:

    - A select granular fill layer at least six inches thick shall be placed on top of the landfill as a suitable sub-grade for the cap. The need for a gas venting system shall be assessed by the PRP's in the remedial design (RD). If it is determined that a gas venting system is necessary, then this layer shall be designed and constructed to serve as a gas-venting layer. This gas-venting layer shall be capable of collecting the landfill gas produced and efficiently conveying it to a passive venting system. Clean granular fill from an off-site source, having a minimum hydraulic conductivity of 1×10^{-3} centimeters per second, shall be used to construct the layer.

    - A geomembrane liner (barrier layer) of at least 30-mil thick polyvinyl chloride (PVC) or its equivalent, as approved by the lead agency, shall be placed over the granular fill. The PVC geomembrane liner shall act as a barrier to minimize infiltration of precipitation into the residuals. The most appropriate liner material shall be determined in the RD and must be approved by the lead agency.

- A general fill layer (protective layer) at least 24 inches thick shall be placed above the 30-mil PVC geomembrane liner, or its equivalent. The protective layer shall be capable of sustaining the growth of nonwoody plants and shall have adequate water holding capacity. The water that accumulates within this layer shall drain to a ditch or a sedimentation outlet structure and subsequently discharge into the Kalamazoo River.

- A vegetative layer at least six inches thick shall be placed over the protective layer. This layer shall be designed to promote vegetative growth, provide surface water runoff, and minimize erosion.

6. Following the completion of the RA, an appropriate groundwater monitoring network shall be installed and long-term groundwater monitoring shall be performed in accordance with an approved monitoring plan. Existing wells that are no longer in use shall be properly abandoned. Monitoring of the groundwater aquifer under the landfill shall be conducted in accordance with Part 201, Environmental Remediation, of the NREPA, and the TSCA (40 CFR Section 761.75(b)(6)).

7. Short-term surface water monitoring shall be conducted during excavation activities in accordance with a lead agency approved monitoring plan.

8. Deed restrictions, approved by the lead agency, that are necessary to appropriately restrict future land use pursuant to Section 20120a(1)(i) of the NREPA shall be imposed on the landfill portion of the 12th St.-OU4 before the RA is final.

9. A fence shall be constructed to enclose the landfill and permanent markers and approved warning signs shall be placed around the perimeter of the landfill as required by Part 201, Environmental Remediation, of the NREPA.

10. The need for a leachate collection system shall be investigated by the PRPs in the RD and shall be designed and constructed as part of the RA if determined to be necessary by the lead agency.

11. Provisions for long-term maintenance and post-closure care, approved by the lead agency, shall be implemented.

Statutory Determinations

The lead agency has concluded that the selected RA for the 12th St.-OU4 is necessary and appropriate to protect human health, safety and welfare, and the environment. The selected RA is in compliance with federal and state requirements that are legally applicable or relevant and appropriate. The United States Environmental Protection Agency (U.S. EPA) concurs with this determination. The selected RA for the 12th St.-OU4 utilizes permanent solutions and alternative treatment technologies, or resource

recovery technologies, to the maximum extent practicable. A final decision on whether additional response actions are necessary for those areas of this OU not addressed in this ROD will be made as part of the ROD for the Phase I portion of the Kalamazoo River.

To ensure that the remedy continues to provide adequate protection of human health and the environment, a review shall be conducted within five years after commencement of the RA, and every five years thereafter. This shall be necessary because this remedy will result in hazardous substances remaining on-site above health-based and ecological based levels.

The lead agency's submission to the U.S. EPA of this ROD and its related documents (e.g., the RI/FS) and its request for concurrence with the determination of this ROD, constitute the application for risk-based disposal approval required by 40 CFR Section 761.61(c)(2), and represents U.S. EPA's determination that the disposal method set forth in this ROD for PCB remediation wastes will not pose an unreasonable risk of injury to human health or the environment.

William E. Muno, Director, Superfund Division
United States Environmental Protection Agency

Date

Russell J. Harding, Director
Michigan Department of Environmental Quality

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Wm. E. Muno — 9/28/01

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